

WHAT IS CLAIMED IS:

1. An image-forming device which forms an image on a recording material at a heating drum heated to a predetermined temperature, the device comprising:

a heating device which heats the heating drum; and

a control device which controls the heating device by on/off control, and alters a period of on/off control in accordance with control modes, the control modes including a printing mode for maintaining the heating drum at the predetermined temperature during image-formation, and at least one ordinary mode which is used at times other than during image-formation,

wherein, if a period of on/off control of the printing mode is T1 and a period of on/off control of the at least one ordinary mode is T0, then

$T1 < T0$.

2. The image-recording device of claim 1, wherein the ordinary mode includes a standby mode which maintains temperature of the heating drum at the predetermined temperature such that image-formation can be initiated promptly, and a pre-heating mode which reduces power consumption of the heating drum while keeping the heating drum in a state such that image-formation can be initiated in a short time, and, if the period of on/off control of the printing mode is T1, a period of on/off control of the standby mode is T2 and a

period of on/off control of the pre-heating mode is T3, then at least one of the following relationships:

$T1 < T2$ and

$T1 < T3$

is satisfied.

3. The image-forming device of claim 2, wherein the periods T1, T2 and T3 are set so as to satisfy the relationship $T1 < T2 < T3$.

4. The image-forming device of claim 1, wherein information of the image is recorded onto a photosensitive material by exposure, and the image is formed on a transfer material which is superposed with the photosensitive material at the heating drum.

5. The image-forming device of claim 1, wherein the control device alters a duty ratio of on/off control in response to a difference between a current temperature of the heating drum and the predetermined temperature.

6. The image-forming device of claim 1, wherein from a time when a power source of the image-forming device is turned on until a time when the predetermined temperature is reached, the period of on/off control of the heating drum is set to a period the same as the period of on/off control of the printing mode, and when the predetermined temperature has been reached, the ordinary mode is selected for

Sub
B
0809530-070601

maintaining the predetermined temperature.

7. The image-forming device of claim 2, wherein, when image-formation has finished, the printing mode is deselected and the standby mode is selected.

8. The image-forming device of claim 2, wherein, if the standby mode is selected and no image-formation is performed for a predetermined period of time, then the pre-heating mode is selected.

9. The image-forming device of claim 2, wherein, in the pre-heating mode, the heating drum is maintained at a temperature lower than the predetermined temperature.

10. The image-forming device of claim 1, wherein there is another temperature control signal at the image-forming device, and a temperature control signal of the heating drum has a phase difference with respect to the other temperature control signal.

11. The image-forming device of claim 1, wherein information of the image is recorded onto a light and heat sensitive material by exposure, and the image is formed on the light and heat sensitive material by heating at the heating drum.

12. An image-forming device in which image information is

109020-0256601
109020-0256601
109020-0256601

exposed onto and carried by photosensitive material, and an image is formed on transfer material by the transfer material being superposed with the photosensitive material at a heating drum heated to a predetermined temperature, the device comprising:

a heating device which heats the heating drum; and

a control device which controls the heating device by on/off control, and alters a period of on/off control in accordance with control modes, the control modes including a printing mode for maintaining the heating drum at the predetermined temperature during image-formation, a standby mode for keeping the heating drum in a state such that image-formation can be initiated promptly, and a pre-heating mode for reducing power consumption of the heating drum while keeping the heating drum in a state such that image-formation can be initiated in a short time,

wherein, if a period of on/off control of the printing mode is T1, a period of on/off control of the standby mode is T2 and a period of on/off control of the pre-heating mode is T3, then

$T1 \leq T2$,

$T1 \leq T3$,

and at least one of T2 and T3 is greater than T1.

13. The image-forming device of claim 12, wherein $T1 < T2 < T3$.